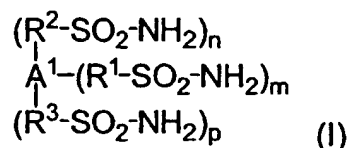


TITLEFLUORINATED SULFONAMIDE COMPOUNDS AND POLYMER
ELECTROLYTE MEMBRANES PREPARED THEREFROM FOR USE IN
ELECTROCHEMICAL CELLSABSTRACT OF THE DISCLOSURE

A fluorinated sulfonamide small molecule having the general structure



wherein m, n, and p are 0 to 3, with the proviso that m + n + p is equal to 1 to 4;

A¹ is an aromatic heterocyclic group, with the proviso that carbon atoms of the heterocyclic ring are fully substituted by fluorinated sulfonamide groups; and

R¹, R², and R³ are linear or branched perfluoroalkylene groups, optionally containing oxygen, chlorine, bromine, or iodine atoms. Polymers and small molecules useful in making polymer electrode membranes, membrane electrode assemblies, and electrochemical cells, such as fuel cells, are also described.